

241-173
31

**JOURNAL
OF
SOUTH AFRICAN
BOTANY**

VOLUME 46

1980

*Published under the authority
of the*

**Trustees
of the
National Botanic Gardens
of
South Africa,
Kirstenbosch,
Newlands, C.P.**

Editor-in-Chief:

Prof. H. B. Rycroft

(Director, National Botanic Gardens of South Africa
Harold Pearson Professor of Botany, University of Cape Town).

Editorial Committee:

Miss L. L. Bosman

Dr. B. de Winter

Prof. N. Grobbelaar

Mr. P. J. Grobler

Dr. J. P. Rourke

Publication dates:

46(1): 1- 98 [2nd January, 1980]

46(2): 99-218 [1st April, 1980]

46(3): 219-328 [1st July, 1980]

46(4): 329-455 [1st October, 1980]

JOURNAL OF SOUTH AFRICAN BOTANY

VOLUME 46

1980

CONTENTS

	Page
ROBERT HAROLD COMPTON: OBITUARY	i
THE IDENTITY OF <i>ANTIZOMA HARVEYANA</i> MIERS EX HARV. AND <i>A. CAPENSIS</i> (L.f.) DIELS. D. J. Botha	1
AN ANATOMICAL STUDY OF THE STEM AND LEAF OF THE MENISPERMACEAE OF SOUTHERN AFRICA. D. J. Botha and H. P. van der Schijff	7
THE ENDOCARP OF THE SOUTHERN AFRICAN MENISPERMACEAE. D. J. Botha	23
POLLEN DEVELOPMENT IN <i>TRITICUM DURUM</i> DESF.: A HISTOCHEMICAL STUDY. C. K. Rudramuniyappa and M. G. Panchaksharappa	33
THE EFFECT OF WATER STRESS ON THE NITROGEN METABOLISM OF TWO MAIZE LINES. 1. EFFECTS ON THE PROTEIN CONTENT AND RNASE ACTIVITY. F. C. Botha and P. J. Botha ..	45
SOME PRELIMINARY OBSERVATIONS ON THE SUBMERGED AQUATIC <i>ZOSTERA CAPENSIS</i> SETCHELL. D. J. Edgcumbe	53
THE GENUS <i>EUGENIA</i> L. (MYRTACEAE) IN SOUTHERN AFRICA: 1. THE NATURE AND TAXONOMIC VALUE OF THE FIRST-FORMED STEM PERIDERM. A. E. van Wyk, D. J. Botha and J. Coetzee	67
A MICROAUTORADIOGRAPHIC STUDY OF THE TRANSLOCATION OF ¹⁴ C-LABELLED ASSIMILATES IN <i>ERAGROSTIS CURVULA</i> (SCHRAD.) NEES. A. D. Barnabas and T. D. Steinke	89
BOOK REVIEW: <i>Flora Zambesiaca</i> , volume 4, edited by E. Launert (K. D. Gordon-Gray)	97
THE SEASONAL VARIATION OF THE PHENOLIC DILACTONE LEUCODRIN IN <i>LEUCADENDRON ARGENTEUM</i> R.BR. C. W. Glennie	99
NOTES ON <i>TULBAGHIA</i> : 2. C. G. Vosa	109
A NOTE ON THE SEED MORPHOLOGY OF THE GENUS <i>EUGENIA</i> L. (MYRTACEAE) IN SOUTHERN AFRICA. A. E. van Wyk	115
COLOUR DISCRIMINATION IN THE POLLINATION OF <i>PORTULACA GRANDIFLORA</i> HOOK. BY <i>APIS MELLIFERA</i> L. D. J. Mogford	121
RE-SURVEY OF THE ALIEN VEGETATION OF THE CAPE PENINSULA. D. McLachlan, E. J. Moll and A. V. Hall	127

	Page
FLAVONOID GLYCOSIDES OF <i>LEUCADENDRON</i> AND THEIR CHEMOTAXONOMIC SIGNIFI- CANCE. C. W. Glennie	147
A REVISION OF <i>THAMINOPHYLLUM</i> HARV. (ASTERACEAE—ANTHEMIDEAE). P. Bond	157
ACAULESCENT GROWTH FORMS OF <i>STRELIT- ZIA</i> : HYBRIDIZATION AND CHROMOSOME NUMBERS. J. G. C. Small, H. A. van de Venter and C. J. Garner	167
SAADVERSPREIDING VAN ENKELE VERTEEN- WOORDIGERS VAN DIE MESEMBRYANTHE- MACEAE. M. W. van Rooyen, A. Barkhuizen en S. E. Myburgh	173
CHROMOSOME NUMBER IN <i>THAMINOPHYLLUM</i> (ASTERACEAE—ANTHEMIDEAE). P. Goldblatt	193
SOME OBSERVATIONS ON THE ANATOMY OF <i>ARTEMISIA AFRA</i> JACQ. C. E. J. Botha and P. P. J. Herman	197
A NEW SPECIES OF <i>EUPHORBIA</i> (SECTION <i>TET- RACANTHAE</i>) FROM THE TRANSVAAL. L. C. Leach	207
<i>DISA CARDINALIS</i> LINDER (ORCHIDACEAE), A NEW SPECIES FROM THE CAPE PROVINCE. H. P. Linder	213
BOOK REVIEWS: <i>Applied and fundamental aspects of plant cell, tissue and organ culture</i> , edited by J. Reinert and Y. P. S. Bajaj (C. H. Bornman). <i>Gene- tic and molecular basis of plant pathogenesis</i> , by J. E. Vanderplank (H. L. Lloyd).	217
n-ALKANES IN <i>PTEROCELASTRUS</i> LEAF WAX. J. Coetzee	219
CHANGES IN THE VEGETATION OF HLUHLUWE GAME RESERVE, ZULULAND, AS REGULATED BY EDAPHIC AND BIOTIC FACTORS OVER 36 YEARS. B. H. Downing	225
GERMINATION AND SEEDLING MORPHOLOGY OF <i>JUBAEOPSIS CAFFRA</i> BECC. (PALMAE). B. L. Robertson	233
CHLORIDE ABSORPTION BY ROOT, LEAF AND FLORAL TISSUES OF <i>PETUNIA</i> . J. H. Jooste ...	245
NOMENCLATURAL NOTES ON SOUTH AFRICAN CRUCIFERAE. B. Nordenstam	251
STRUCTURE OF THE MATURING TESTA OF <i>ACACIA GALPINII</i> BURTT DAVY. J. Coetzee and P. J. Robbertse	265
APPLICATION OF THE NAME <i>PELARGONIUM TABULARE</i> (GERANIACEAE). J. J. A. van der Walt and P. J. Vorster	279
NAME CHANGES IN <i>PELARGONIUM</i> (GERA- NIACEAE). J. J. A. van der Walt and P. J. Vorster	283
MANGROVE SOILS OF THE BEACHWOOD AREA, DURBAN. G. Naidoo	293

	Page
SOME CHARACTERISTICS OF LEAF AND INFLORESCENCE PRODUCTION OF <i>STRELITZIA REGINAE</i> AIT. IN PORT ELIZABETH. H. A. van de Venter and J. G. C. Small	305
<i>EUPHORBIA QUADRANGULARIS</i> PAX AND A CLOSELY RELATED NEW SPECIES FROM TANZANIA. L. C. Leach	313
BOOK REVIEWS: <i>Physiological ecology of the Alpine timberline tree existence at high altitudes with special reference to the European Alps</i> , by W. Tranquillini (O. Kerfoot). <i>Physiology of movements</i> , edited by W. Haupt and M. E. Feinleib (C. H. Bornman). <i>Plantkunde: organografie en sitologie</i> , deur W. F. Reyneke, L. A. Coetzer en N. Grobbelaar (J. J. A. van der Walt). <i>Praktiese plantkunde</i> , deur W. F. Reyneke, P. D. F. Kok en N. Grobbelaar (J. Coetzee)	325
ANNOUNCEMENT	328
STUDIES IN ORCHIDACEAE FROM SOUTH CENTRAL AFRICA. G. Williamson	329
PERIODICITY IN FYNBOS OF THE NON-SEASONAL RAINFALL BELT. W. J. Bond	343
KARYOTYPE ANALYSIS OF THE GENUS <i>EUCOMIS</i> (LILIACEAE). W. F. Reyneke and H. Liebenberg	355
A FLUORESCENCE TECHNIQUE FOR THE DETECTION OF KNOBS IN THE MITOTIC CHROMOSOMES OF MAIZE. D. J. Mogford and C. G. Vosa	361
STUDIES IN THE GENUS <i>WATSONIA</i> MILLER. J. P. Roux	365
AN ANNOTATED REVISION OF THE GENUS <i>SCHIZOCHILUS</i> SOND. (ORCHIDACEAE). H. P. Linder	379
THE VEGETATION OF THE EDITH STEPHENS CAPE FLATS FLORA RESERVE. B. Campbell, A. Gubb and E. Moll	435
CHROMOSOME ANALYSIS AND HETEROCHROMATIN RECOGNITION IN THE SOUTHERN AFRICAN SPECIES OF <i>ORNITHOGALUM</i> . 1. <i>ORNITHOGALUM SEINERI</i> (ENGL. & KR.) OBERM. C. G. Vosa	445
BOOK REVIEWS: <i>Plant cell and tissue culture: principles and applications</i> , edited by W. R. Sharp, P. O. Larsen, E. F. Paddock and V. Raghavan (C. H. Bornman). <i>In vitro culture of higher plants: bibliography</i> , by R. L. M. Pierik (C. H. Bornman). <i>Proceedings of the Third National Weeds Conference of South Africa</i> (M. J. Wells)	451
INDEX TO PLANT NAMES: Vol. 46 (1-4)	455
Indexed in <i>Current Advances in Plant Science</i> and <i>Index to South African Periodicals</i>	